

IN THE CLAIMS:

Amend the following claims:

1. (cancelled)
2. (currently amended) An objective lens ~~according to claim 1, further~~ including:
an optical element made of a medium that shows an internal transmittance of at least 50% through a thickness of 10mm for a wavelength of 300nm; and
at least one diffractive optical element ~~constructed of a medium used as having~~ a substrate, ~~having~~ made of a medium that shows an internal transmittance of at least 50% ~~[[at]]~~ through a thickness of 10mm for a wavelength of 300 nm ~~when a thickness is 10 mm.~~
3. (currently amended) An objective lens according to claim ~~[[1]]~~ 2, wherein the diffractive optical element is optimized to take advantage of a fluorescent wavelength.
4. (currently amended) An objective lens according to claim ~~[[1]]~~ 2, ~~further~~ including at least one cemented lens component ~~made up of~~ having lens elements ~~having~~ made of media of different refractive indices and Abbe's numbers.
5. (currently amended) An objective lens according to claim ~~[[1]]~~ 2, wherein an NA of the objective lens where correction for aberration is made and an NA of the objective lens where ~~[[the]]~~ an effective diameter is determined are different from each other to satisfy the following condition:
$$NA_e > 1.5 \times NA_c$$
where NA_e is the NA of the objective lens where the effective diameter is deter-mined and NA_c is the NA of the objective lens where correction for aberration is made.
6. (currently amended) An objective lens according to claim ~~[[1]]~~ 2, constructed as a water-immersion objective lens in which ~~the~~ an NA of the objective lens where ~~[[the]]~~ an effective diameter is determined is at least 0.6.

7. (currently amended) An objective lens according to claim [[1]] 2, wherein an optical path length extending along an optical axis is 20 mm or less.
8. (currently amended) An objective lens according to claim [[1]] 2, wherein group delay dispersion relating to an axial ray of light is 1000 f sec^2 or less.
9. (currently amended) An objective lens according to claim [[1]] 2, wherein at least one of the ~~medium~~ media that show an internal transmittance of at least 50% through a thickness of 10mm for a wavelength of 300nm is quartz or fluorite.
10. (currently amended) An objective lens according to claim [[1]] 2, comprising, in order from an object side[[,]]:
 - a plano-convex lens made of quartz, with a convex surface facing an image side; a positive meniscus lens made of quartz, with a convex surface facing the image side; a cemented doublet of a negative meniscus lens made of quartz and a biconvex lens made of fluorite; and a diffractive optical element.
11. (currently amended) An objective lens according to claim [[1]] 2, wherein a wavelength region of the objective lens where for which correction for ~~aberration~~ aberrations is made is a near-infrared region.
12. (currently amended) An objective lens according to claim [[1]] 2, wherein correction for ~~aberration~~ aberrations is made ~~in accordance with~~ for each wavelength region ~~which is a near infrared region and has~~ band having a bandwidth of at least 30 nm in a near infrared region, and a best position in each wavelength region ~~band~~ band varies.
13. (currently amended) An objective lens according to claim [[1]] 2, exclusively used in a multiphoton microscope.
14. (currently amended) An objective lens according to claim 5, wherein a region from a center of [[a]] the diffractive optical element to the numerical aperture NAc is different from a region

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from the numerical aperture NAc to the numerical aperture NAe in diffraction efficiency or focal length of the diffractive optical element.